

AMENDMENTS TO THE CLAIMS

1. (Previously Presented): A bus controller card for use with a backplane having a bus controller slot connected to a first bus including a first plurality of ports and a second bus including a second plurality of ports, comprising:

- a first backplane connector adapted for connection to a card-selectable one of the first bus and the second bus;
- a second backplane connector adapted for connection to the other one of the first bus and the second bus; and
- a first switchbox comprising a plurality of individual switches operationally connected to said first backplane connector and said second backplane connector, the individual switches including a first bus address control switch that controls addressing of the first plurality of ports on said first bus and a second bus address control switch that controls addressing of the second plurality of ports on said second bus, the first and second bus address control switches controlling addressing independent of the first and second bus connections to the first and second backplane connectors.

2. (Original): The bus controller card of claim 1, wherein said plurality of individual switches are DIP switches.

3. (Original): The bus controller card of claim 1, wherein the bus controller card further comprises:

- a first host connector electrically connected to said first backplane connector along a first signal path; and
 - a second host connector electrically connected to said second backplane connector along a second signal path,
- wherein each said host connector and said switchbox are located on an end of the bus controller card.

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4. (Original): The bus controller card of claim 3, further comprising:
a first terminator electrically connected to said first host connector, said first terminator also electrically connected to one said individual switch in said first switchbox; and
a second terminator electrically connected to said second host connector, said second terminator also electrically connected to a different said individual switch in said first switchbox.

5. (Original): The bus controller card of claim 1, further comprising a controller electrically connected to said first switchbox, said first backplane connector and said second backplane connector.

6. (Previously Presented): A bus controller system, comprising:
a backplane, comprising:
a first bus including a first plurality of ports,
a second bus including a second plurality of ports,
a first bus controller slot connected to said first bus and said second bus, and
a second bus controller slot connected to said first bus and said second bus, and
two bus controller cards, each card received by one of said bus controller slots,
each bus controller card comprising:
a first backplane connector connected to a card-selectable one of said buses through said respective bus controller slot,
a second backplane connector connected to the other one of said buses through said respective bus controller slot,
a first switchbox comprising a plurality of individual DIP switches operationally connected to said first backplane connector and said second backplane connector, the individual DIP switches including a first DIP switch that controls addressing of the first plurality of ports on said first bus and a second DIP switch that controls addressing of the second plurality of ports on said second bus, the first and second DIP

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switches controlling addressing independent of the first and second bus connections to the first and second backplane connectors.

7. (Original): The system of claim 6, wherein said bus controller cards are received in said bus controller slots in different orientations from one another.

8. (Original): The system of claim 6, wherein said DIP switches on both of said bus controller cards are set to the same positions where said bus controller cards are in reference orientation.

9. (Previously Presented): The system of claim 6, wherein each bus controller card further comprises a controller electrically connected to said first switchbox, said first backplane connector, and said second backplane connector.

10. (Original): The system of claim 9, wherein said controller is adapted to detect which said bus is connected to each said backplane connector.

11. (Original): The system of claim 9, wherein each bus controller card further comprises a second switchbox comprising a plurality of DIP switches, said second switchbox electrically connected to said controller.

12. (Original): The system of claim 9, wherein each bus controller card further comprises a bridge electrically connecting the first bus to the second bus.

13. (Previously Presented): The system of claim 6, wherein each bus controller card further comprises:

a first host connector electrically connected to said first backplane connector along a first signal path; and

a second host connector electrically connected to said second backplane connector along a second signal path,

wherein said first host connector, said second host connector, and said switchbox are located on an end of each said bus controller card.

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14. (Original): The system of claim 13, wherein each bus controller card further comprises:

- a first terminator electrically connected to said first host connector, said first terminator also electrically connected to one said individual switch in said first switchbox; and
- a second terminator electrically connected to said second host connector, said second terminator also electrically connected to a different said individual switch in said first switchbox.

15. (Currently Amended): A method for configuring ~~two~~ bus controller cards ~~for use with a first bus and a second bus accessed via a backplane having a plurality of bus controller card slots, where each bus controller card includes at least two backplane connectors and a plurality of switches, each switch associated with a control signal,~~ comprising:

- providing a backplane having a bus controller slot connected to a first bus including a first plurality of ports and a second bus including a second plurality of ports;
- providing two bus controller cards, each including at least two backplane connectors and a plurality of switches that control addressing of the plurality of ports on said first and second buses;
- placing the two bus controller cards for viewing in a reference orientation;
- setting the switches on each bus controller card to the same positions when viewed in the reference orientation; and
- inserting each bus controller card into one of the bus controller slots on the backplane in any relative orientation, the bus controller cards controlling addressing independent of the bus connections to the backplane connectors, ensuring multiple card functionality without conflict.

16. (Original): The method of claim 15, further comprising:
detecting a signal at one of the backplane connectors on each bus controller card; and
determining based on said detected signal which bus is connected to each backplane connector on each bus controller card.

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17. (Original): The method of claim 15, wherein said inserting further comprises orienting the bus controller cards in different directions from one another, said directions corresponding to the orientation of the bus controller slots.

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